Report No.: DDT-R17Q0518-6E1

Issued Date: Jun. 04, 2017

FCC CERTIFICATION TEST REPORT

FOR

Applicant	:	iSmart Alarm, Inc.
Address	:	1290 Kifer Road Suite 306, Sunnyvale, CA 94086, US
Equipment under Test	:	Keypad
Model No.	:	KP3
FCC ID	:	SENKP3
Manufacturer	:	iSmart Alarm, Inc.
Address	:	1290 Kifer Road Suite 306, Sunnyvale, CA 94086, US

DONG DIAN TESTING

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

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REPORT

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TEST REPORT DECLARE

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FCC ID	**:**	SENKP3
Manufacturer	**:**	iSmart Alarm, Inc.
Address	**:**	1290 Kifer Road Suite 306, Sunnyvale, CA 94086, US

Test Standard Used: FCC Rules and Regulations Part 15 Subpart C

Test procedure used: ANSI C63.10:2013, ANSI C63.4:2014.

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No.:	DDT-R17Q0518-6E1		
Date of Receipt:	May 18, 2017	**Date of Test:**	May 18, 2017 ~ Jun. 04, 2017

Prepared By: ***Approved By:***

Damon Hu/Engineer ***Kevin Feng/EMC Manager***

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

1. Summary of test results

EMISSION		
Description of Test Item	**Standard**	**Results**
Power Line Conducted Emission Test	FCC Part 15C:15.207 ANSI C63.10:2013	**N/A**
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.10:2013 ANSI C63.4:2014	**PASS**
20dB Bandwidth Test	FCC Part 15: 15.215 ANSI C63.10:2013	**PASS**
N/A is an abbreviation for Not Applicable.		

2. General test information

2.1. Description of EUT

EUT* Name	:	Keypad
Model Number	:	KP3
EUT function description	:	Please reference user manual of this device
Power supply	:	DC 4.5V from battery
Operation frequency	:	908MHz
Modulation	:	GFSK
Antenna Type	:	Integrated coil antenna, Maximum Gain: 0.5dBi
Sample Type	:	Series production

Note: EUT is the ab. of equipment under test.

2.2. Accessories of EUT

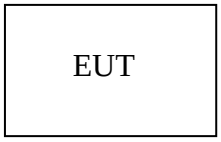
Description of Accessories	Manufacturer	Model number	Other
/	/	/	/

2.3. Assistant equipment used for test

Description of Assistant equipment	Manufacturer	Model number	Other
/	/	/	/

2.4. Block diagram of EUT configuration for test

TX Mode:



Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
Tx Mode	/	908

2.5. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25℃
Humidity range:	40-75%
Pressure range:	86-106kPa

2.6. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd

Add: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808 Tel: +86-0769-89201699 http://www.dgddt.com

FCC Registration Number: 270092; Industry Canada site registration number: 10288A-1

CNAS Accreditation No. L6451; A2LA Accreditation No. 3870.01

2.7. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power(Conducted)(Spectrum analyzer)	0.86dB(10 MHz ≤ f < 3.6GHz);
	1.38dB(3.6GHz≤ f < 8GHz)
Peak Output Power(Conducted)(Power Sensor)	0.74dB
Dwell Time	0.6%
Conducted spurious emissions	0.86dB(10 MHz ≤ f < 3.6GHz);
	1.40dB(3.6GHz≤ f < 8GHz)
	1.66dB(8GHz≤ f < 22GHz)
Uncertainty for radio frequency (RBW<20KHz)	3×10^{-8}
Temperature	0.4℃
Humidity	2%
Uncertainty for Radiation Emission test (30MHz-1GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz-18GHz)	4.10dB(1-6GHz)
	4.40dB (6GHz-18Gz)
Uncertainty for Power line conduction emission test	3.32dB (150KHz-30MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment used during test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
RF Connected Test					
Spectrum analyzer	R&S	FSU26	1166.1660.26	Oct. 16, 2016	1 Year
Vector Signal Generator	Agilent	E8267D	MY52098743	Oct. 20, 2016	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Jul. 05, 2016	1 Year
Power Sensor	Agilent	U2021XA	MY55150010	Apr. 18, 2017	1 Year
Power Sensor	Agilent	U2021XA	MY55150011	Apr. 19, 2017	1 Year
DC Power Source	MATRIS	MPS-3005L-3	D813058W	Oct. 24, 2016	1 Year
Attenuator	Mini-Circuits	BW-S10W2	101109	Aug. 18, 2016	1 Year
RF Cable	Micable	C10-01-01-1	100309	Aug. 18, 2016	1 Year
Test Software	JS Tonscend	JS1120-2	Ver.2.5	N/A	N/A
USB Data acquisition	Agilent	U2531A	TW55043503	N/A	N/A
Auto control Unit	JS Tonscend	JS0806-2	158060010	N/A	N/A
Radiated Emission Test					
EMI Test Receiver	R&S	ESU8	100316	Oct. 16, 2016	1 Year
Spectrum analyzer	R&S	FSU26	1166.1660.26	Oct. 16, 2016	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Oct. 27, 2016	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Oct. 16, 2016	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Oct. 12, 2016	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Oct. 16, 2016	1 Year
RF Cable	HUBSER	CP-X2	W11.03	Oct. 16, 2016	1 Year
RF Cable	HUBSER	CP-X1	W12.02	Oct. 16, 2016	1 Year
MI Cable	HUBSER	C10-01-01-1M	1091629	Oct. 16, 2016	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Power Line Conducted Emissions Test					
Test Receiver	R&S	ESU8	100316	Oct. 16, 2016	1 Year
LISN 1	R&S	ENV216	101109	Oct. 16, 2016	1 Year
LISN 2	R&S	ESH2-Z5	100309	Oct. 16, 2016	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Oct. 16, 2016	1 Year
CE Cable 1	HUBSER	ESU8/RF2	W10.01	Oct. 16, 2016	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. 20dB Bandwidth

4.1. Block diagram of test setup

4.2. Limits

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.3. Test Procedure

(1) The EUT's RF signal was coupled to spectrum analyzer by a antenna connected to spectrum analyzer.

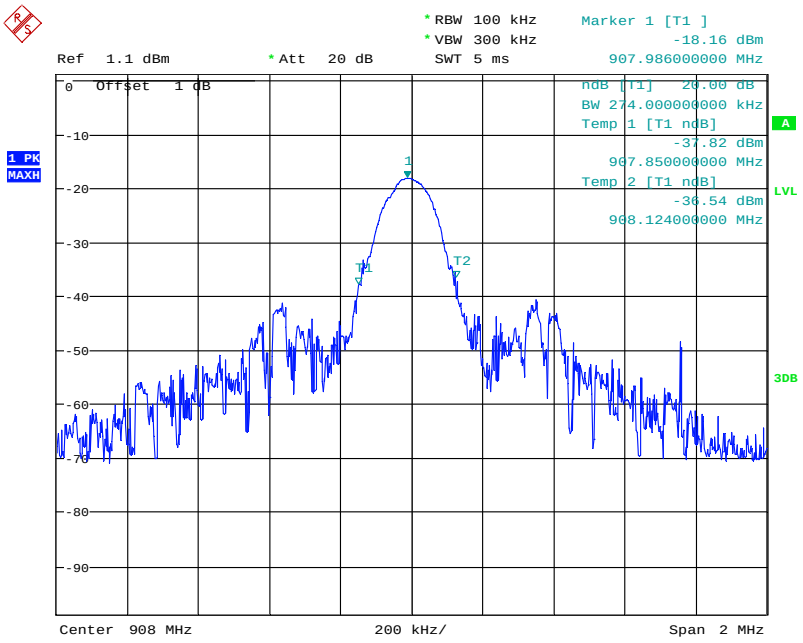
(2) Configure EUT work in Tx mode as stated in clause 2.3.

(3) The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 300 kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.4. Test Result

EUT: Keypad M/N: KP3					
Mode	Freq. (MHz)	Result (MHz)	Limit (MHz)	Margin (MHz)	Conclusion
Tx Mode	908	0.274	/	/	PASS
Test Date : Jun. 02, 2017				Test Engineer : Leo Liu	

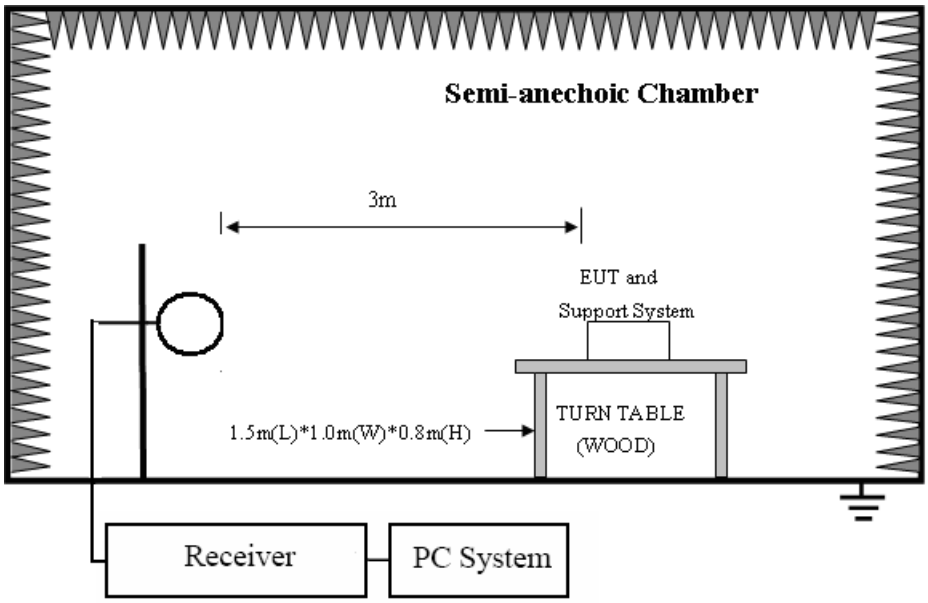
4.5. Original test data



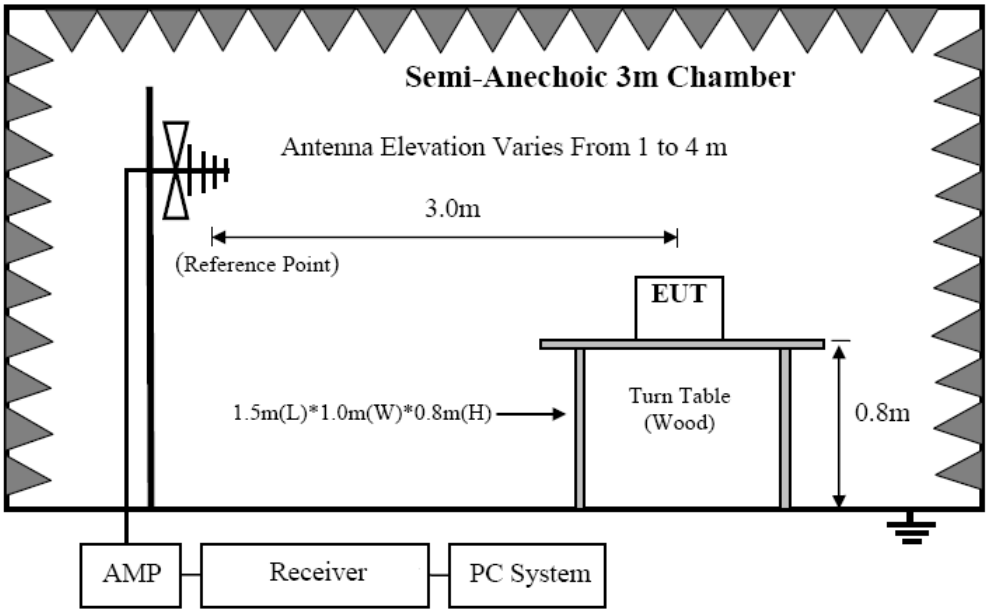
5. Radiated emission

5.1. Block diagram of test setup

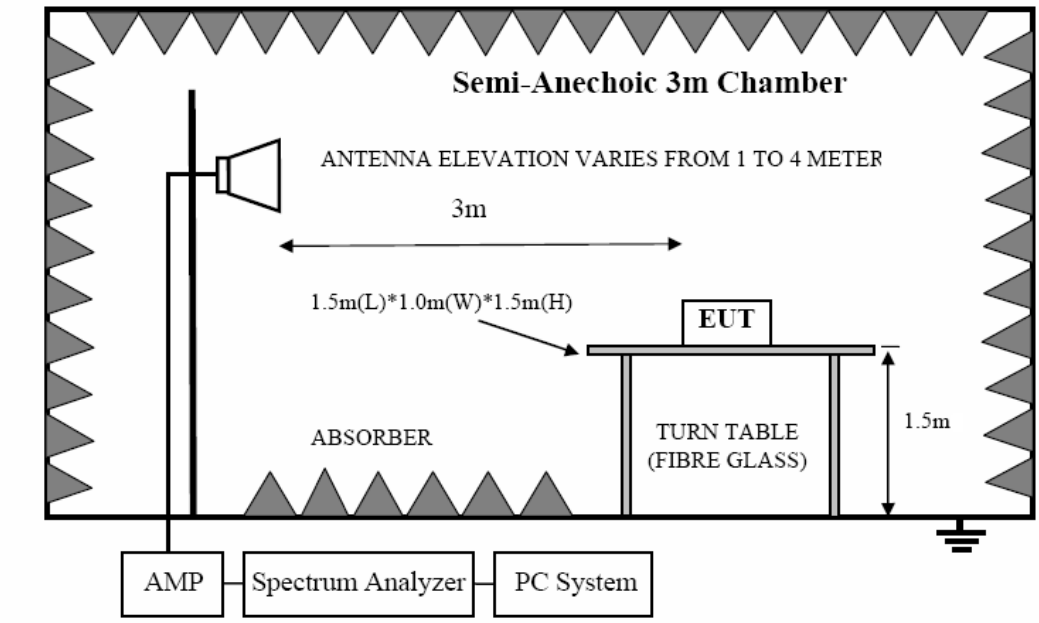
In 3m Anechoic Chamber Test Setup Diagram for 9KHz-30MHz



In 3m Anechoic Chamber Test Setup Diagram for 30MHz-1GHz



In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

5.2. Limit

3.3.1 FCC 15.209 limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(KHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(KHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark：(1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

(4) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

(5) At frequencies below 30MHz, measurement may be performed at a distance closer then that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$

3.3.2 FCC 15.249 limit

FREQUENCY MHz	DISTANCE Meters	Limit
Field Strength of Fundamental emission for 902MHz-928MHz	3	94.0 dB(μV)/m (QP)
Field Strength of Harmonics	3	54.0 dB(μV)/m (QP)

Note: Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

5.3. Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Setup EUT and assistant system according clause 2.4 and 8.2

(3) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used
9KHz-30MHz	Active Loop antenna
30MHz-1GHz	Trilog Broadband Antenna
1GHz-18GHz	Double Ridged Horn Antenna(1GHz-18GHz)
18GHz-40GHz	Horn Antenna(18GHz-40GHz)

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the loop is 1 m above the ground. for measurement above 30MHz, the Trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(4) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9KHz to 25GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1m to 4m(Except loop antenna, it’s fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage.

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 9KHz to 30MHz and 18GHz to 25GHz, so below final test was performed with frequency range from 30MHz to 18GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(6) The emissions from 9KHz to 1GHz were measured based on CISPR QP detector except for the frequency bands 9-90KHz, 110-490KHz, for emissions from 9KHz-90KHz,110KHz-490KHz and above 1GHz were measured based on average detector, for emissions above 1GHz, peak emissions also be measured and need comply with Peak limit.

(7) The emissions from 9KHz to 1GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9KHz-150KHz	200Hz
150KHz-30MHz	9KHz
30MHz-1GHz	120KHz

(8) For emissions above 1GHz, and the RBW is set at 1MHz, VBW is set at 3MHz, peak detector for PK, RMS detector for AV. Read the Level in spectrum analyzer and record.

(9) X axis, Y axis, Z axis are tested, and worse setup X axis is reported.

5.4. Test result

PASS. (See below detailed test result)

All the emissions except fundamental emission from 9 KHz to 10GHz were comply with 4.3.1 limit.

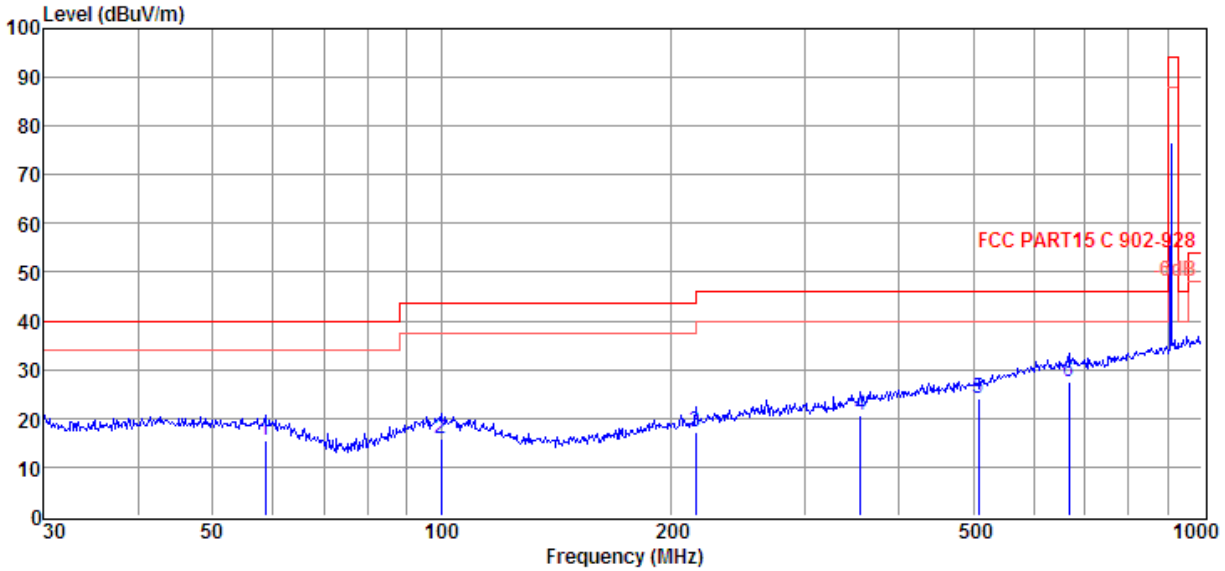
Note1: According exploratory test no any obvious emission were detected from 9kHz to 30MHz, so the final test was performed with frequency range from 30MHz to 10GHz and recorded in below.

Note2: For emissions above 1GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2017 RE1# Report Data\17Q0518-6\RE.EM6	
Test Date	: 2017-06-04	**Tested By**	: Aaron
EUT	: Keypad	**Model Number**	: KP3
Power Supply	: DC 4.5V from battery	**Test Mode**	: TX mode
Condition	: Temp:24.5'C,Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2016 VULB9163 1#/3m/VERTICAL
Memo	:		

Data: 3



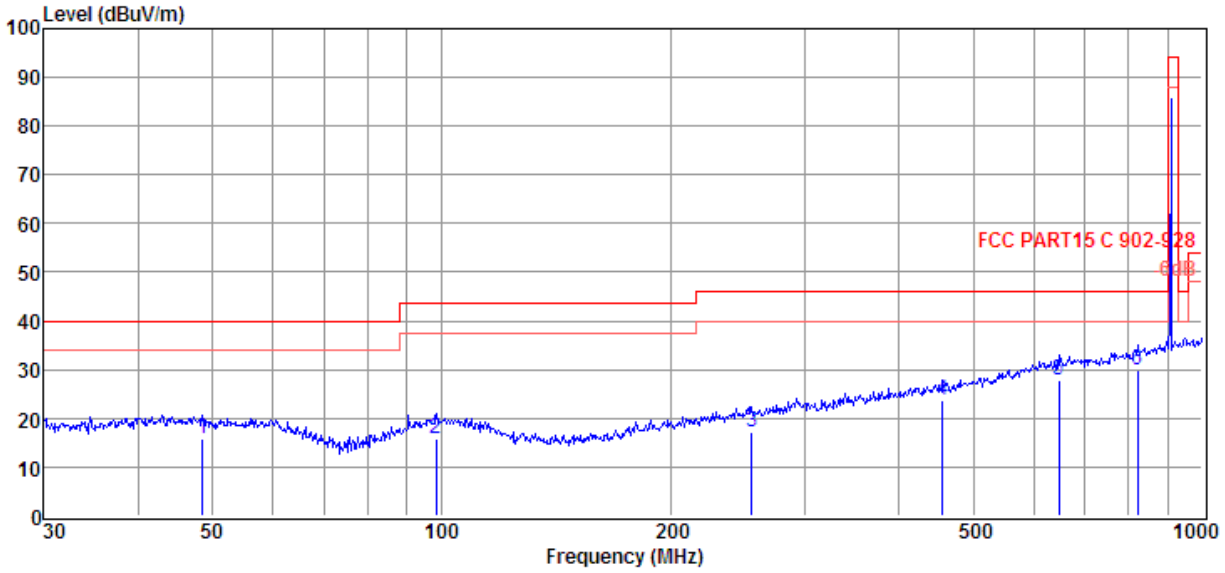
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	58.61	-0.16	11.70	3.97	15.51	40.00	-24.49	QP	VERTICAL
2	99.88	-0.34	11.99	4.30	15.95	43.50	-27.55	QP	VERTICAL
3	216.02	1.13	11.06	4.98	17.17	46.00	-28.83	QP	VERTICAL
4	355.43	0.09	14.86	5.61	20.56	46.00	-25.44	QP	VERTICAL
5	508.26	0.24	17.50	6.20	23.94	46.00	-22.06	QP	VERTICAL
6	668.14	0.89	19.76	6.73	27.38	46.00	-18.62	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2017 RE1# Report Data\17Q0518-6\RE.EM6	
Test Date	: 2017-06-04	**Tested By**	: Aaron
EUT	: Keypad	**Model Number**	: KP3
Power Supply	: DC 4.5V from battery	**Test Mode**	: TX mode
Condition	: Temp:24.5'C,Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2016 VULB9163 1#/3m/HORIZONTAL
Memo	:		

Data: 4



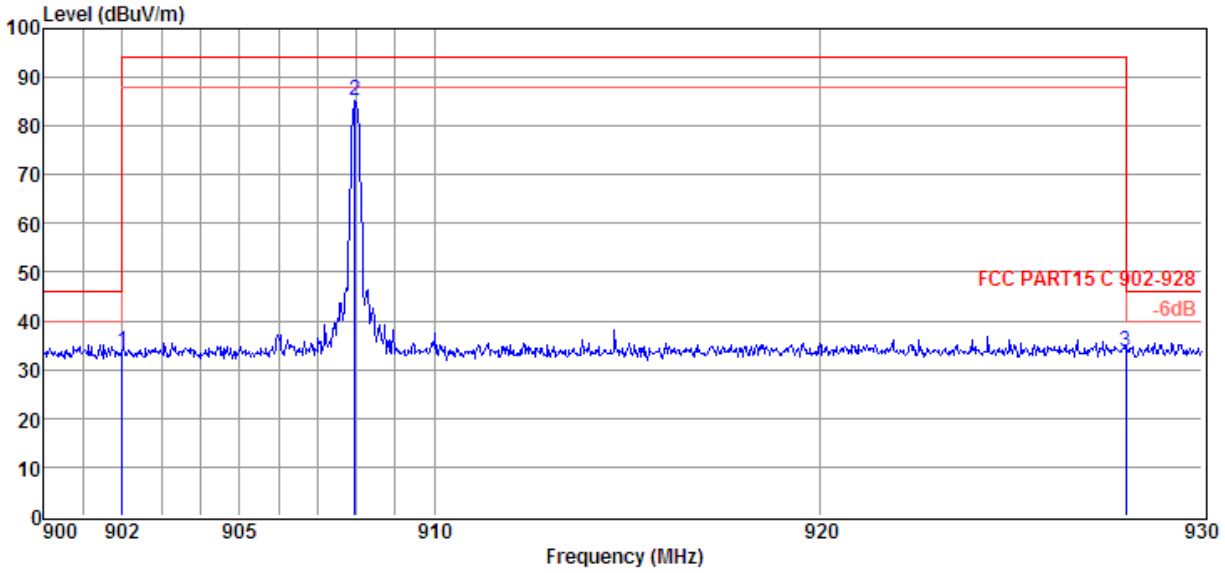
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	48.50	-0.37	12.22	3.87	15.72	40.00	-24.28	QP	HORIZONTAL
2	98.49	-0.26	11.88	4.28	15.90	43.50	-27.60	QP	HORIZONTAL
3	255.62	-0.29	12.31	5.17	17.19	46.00	-28.81	QP	HORIZONTAL
4	455.91	1.36	16.30	6.01	23.67	46.00	-22.33	QP	HORIZONTAL
5	647.39	1.73	19.45	6.66	27.84	46.00	-18.16	QP	HORIZONTAL
6	821.71	1.45	21.42	7.19	30.06	46.00	-15.94	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2017 RE1# Report Data\17Q0518-6\RE.EM6	
Test Date	: 2017-06-04	**Tested By**	: Aaron
EUT	: Keypad	**Model Number**	: KP3
Power Supply	: DC 4.5V from battery	**Test Mode**	: TX mode
Condition	: Temp:24.5'C,Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2016 VULB9163 1#/3m/HORIZONTAL
Memo	:		

Data: 5



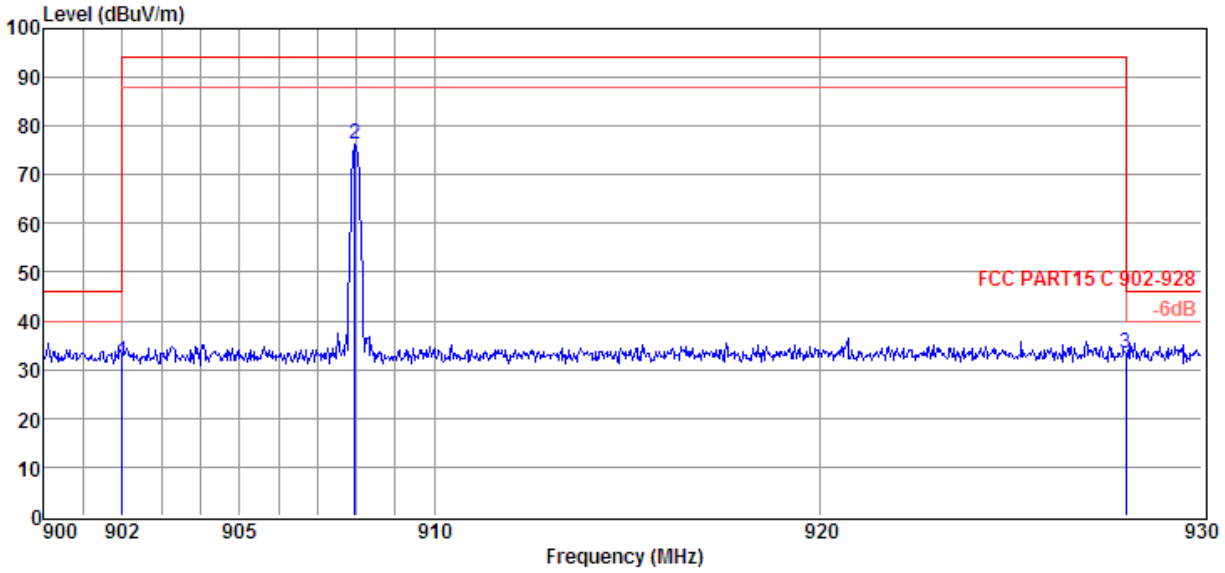
Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	902.00	3.79	22.34	7.43	33.56	46.00	-12.44	Peak	HORIZONTAL
2	907.97	55.20	22.46	7.44	85.10	94.00	-8.90	Peak	HORIZONTAL
3	928.00	3.48	22.70	7.49	33.67	46.00	-12.33	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 1#	D:\2017 RE1# Report Data\17Q0518-6\RE.EM6	
Test Date	: 2017-06-04	**Tested By**	: Aaron
EUT	: Keypad	**Model Number**	: KP3
Power Supply	: DC 4.5V from battery	**Test Mode**	: TX mode
Condition	: Temp:24.5'C,Humi:55%, Press:100.1kPa	**Antenna/Distance**	: 2016 VULB9163 1#/3m/VERTICAL
Memo	:		

Data: 6



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	902.00	1.92	22.34	7.43	31.69	46.00	-14.31	Peak	VERTICAL
2	907.97	46.31	22.46	7.44	76.21	94.00	-17.79	Peak	VERTICAL
3	928.00	3.23	22.70	7.49	33.42	46.00	-12.58	Peak	VERTICAL

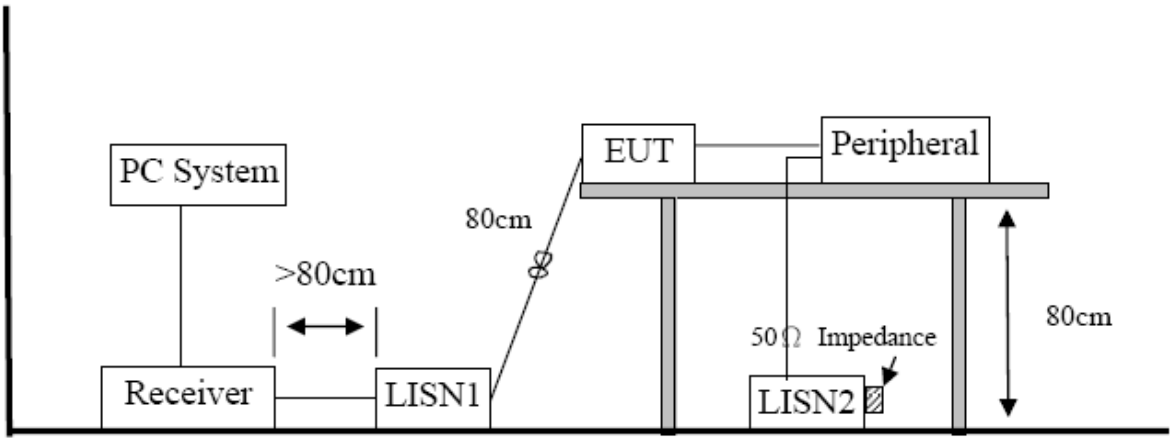
Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission above 1GHz

Freq. (MHz)	Read Level (dBμV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBμV/m)	Limit Line (dBμV/m)	Over Limit (dB)	Detector	Polarization
2782.00	36.14	31.08	30.09	6.50	43.63	74.00	-30.37	Peak	VERTICAL
4537.00	37.07	33.79	29.23	8.18	49.81	74.00	-24.19	Peak	VERTICAL
5455.00	35.85	34.61	29.28	9.14	50.32	74.00	-23.68	Peak	VERTICAL
7138.00	34.58	36.31	30.45	10.56	51.00	74.00	-23.00	Peak	VERTICAL
7993.00	35.77	36.70	31.13	11.13	52.47	74.00	-21.53	Peak	VERTICAL
9163.00	35.10	37.13	32.39	12.01	51.85	74.00	-22.15	Peak	VERTICAL
2602.00	37.61	30.53	29.92	6.28	44.50	74.00	-29.50	Peak	HORIZONTAL
4267.00	35.04	33.62	29.10	7.90	47.46	74.00	-26.54	Peak	HORIZONTAL
5815.00	33.39	34.89	29.21	9.50	48.57	74.00	-25.43	Peak	HORIZONTAL
7120.00	34.41	36.30	30.44	10.55	50.82	74.00	-23.18	Peak	HORIZONTAL
7678.00	34.61	36.64	30.96	10.95	51.24	74.00	-22.76	Peak	HORIZONTAL
7993.00	35.22	36.70	31.13	11.13	51.92	74.00	-22.08	Peak	HORIZONTAL

6. Power Line Conducted Emission

6.1. Block diagram of test setup



6.2. Power Line Conducted Emission Limits(Class B)

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

6.3. Test Procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4:2014.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 KHz.

6.4. Test Result

Test result: Not Applicable.

7. Antenna Requirements

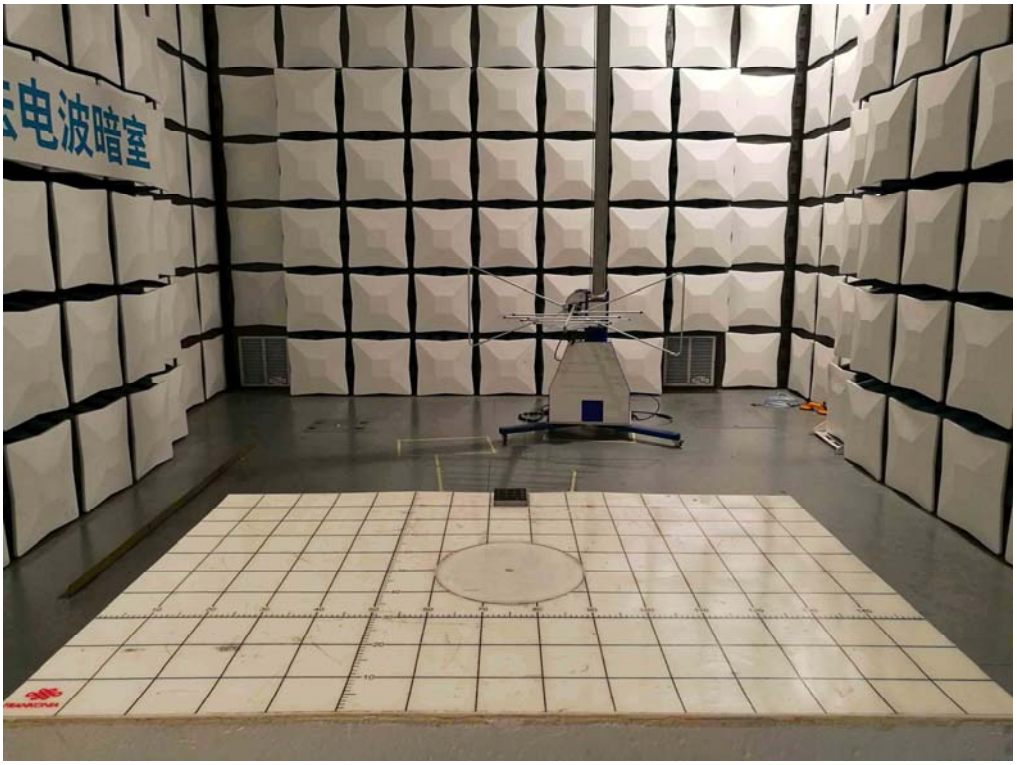
7.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

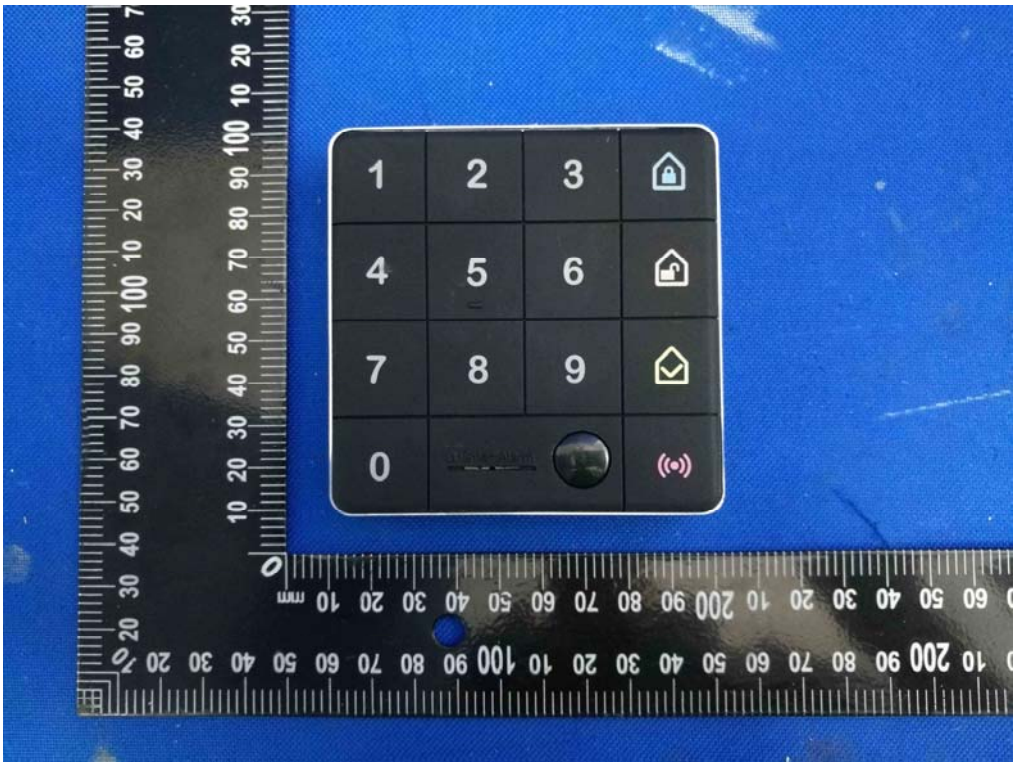
7.2. Result

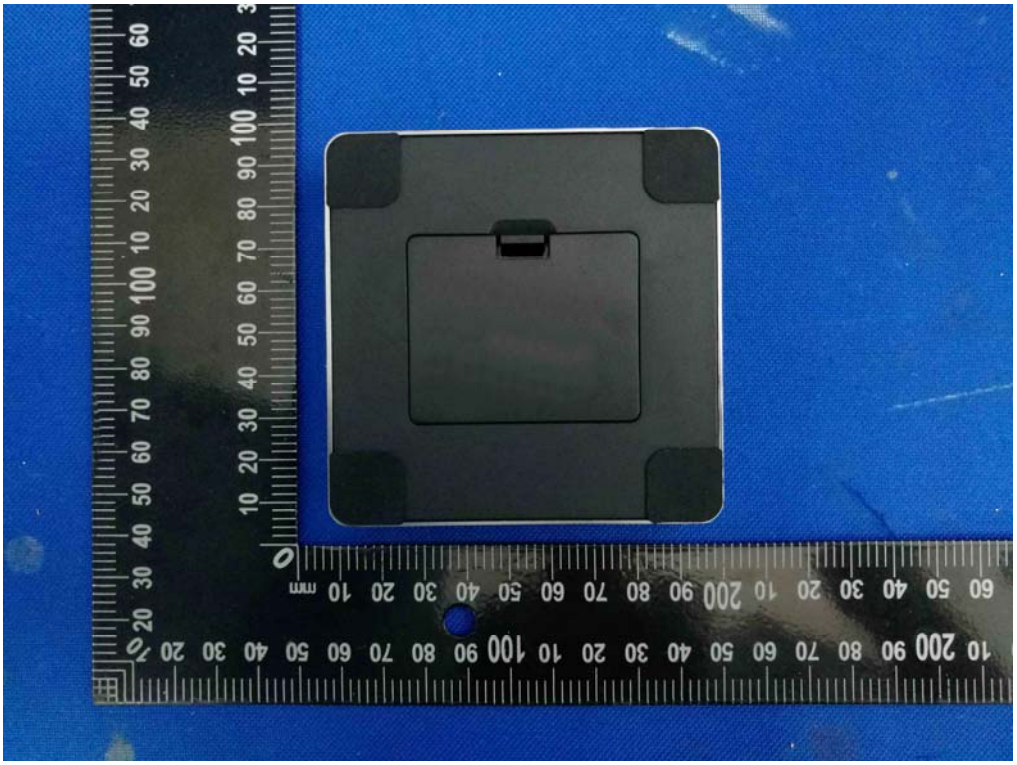
The antennas used for this product are integral coil Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0.5dBi.

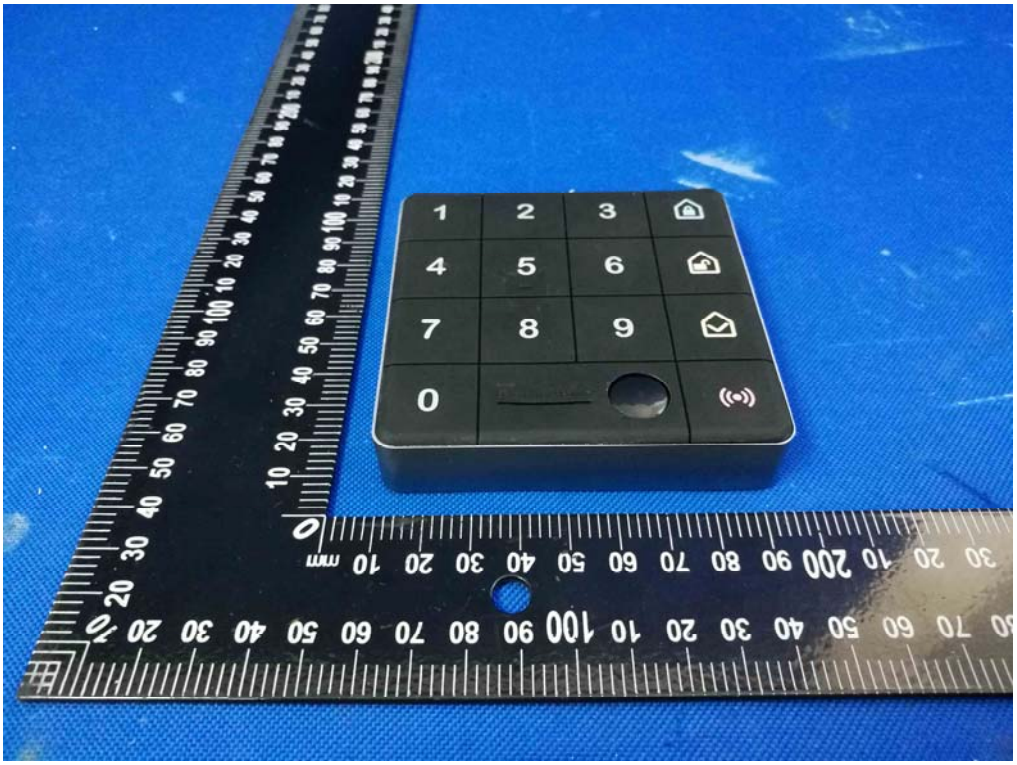
8. Test setup photograph



9. Photos of the EUT



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7 8 9
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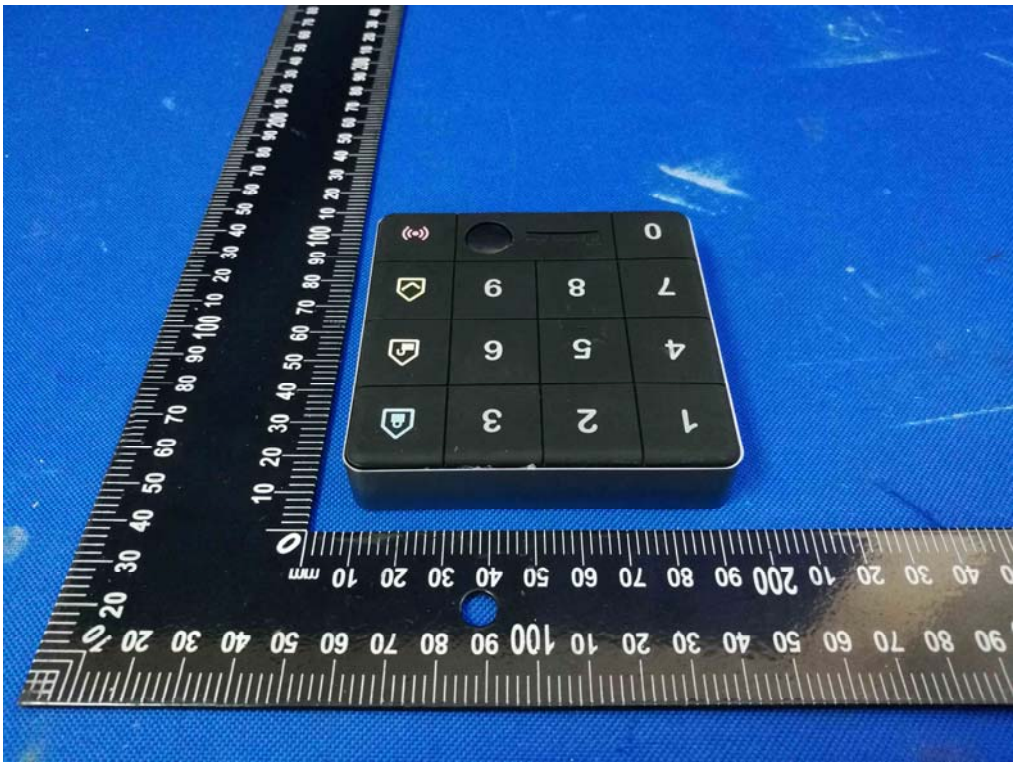
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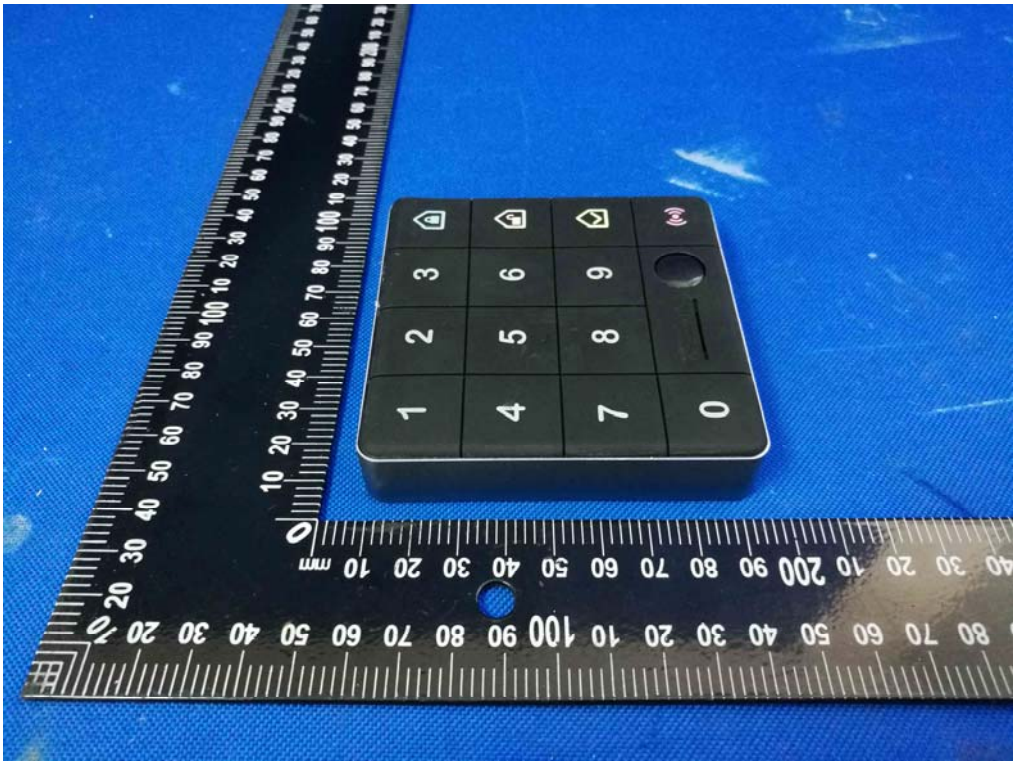
7 8 9
4 5 6
1 2 3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2
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1
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7
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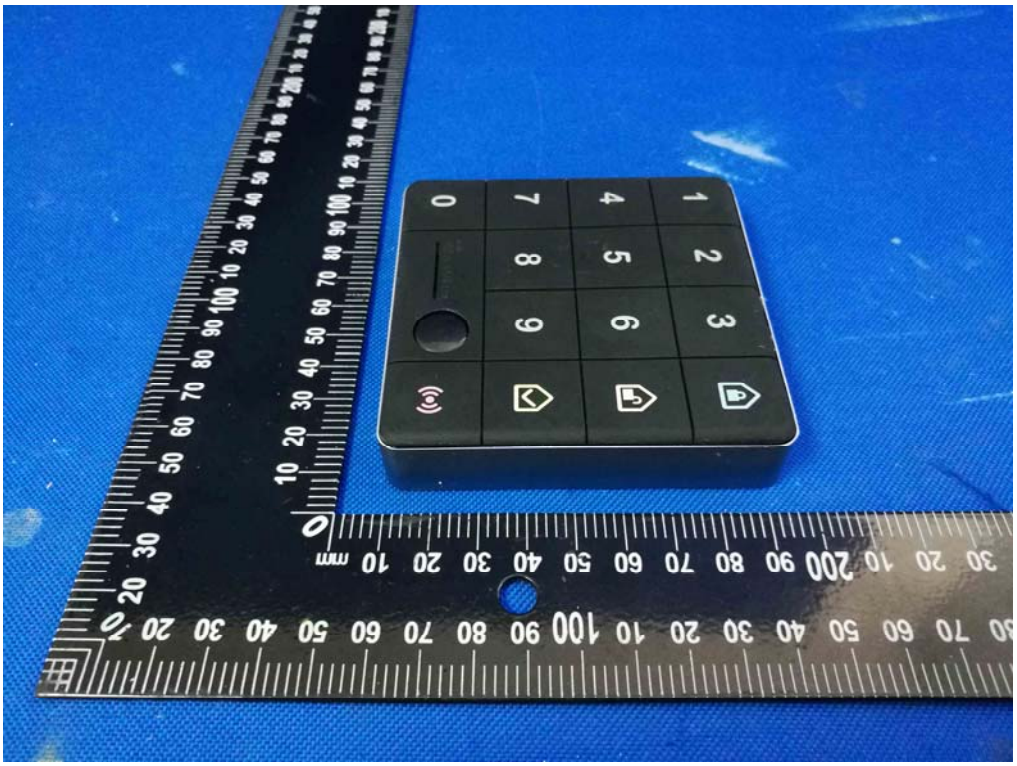
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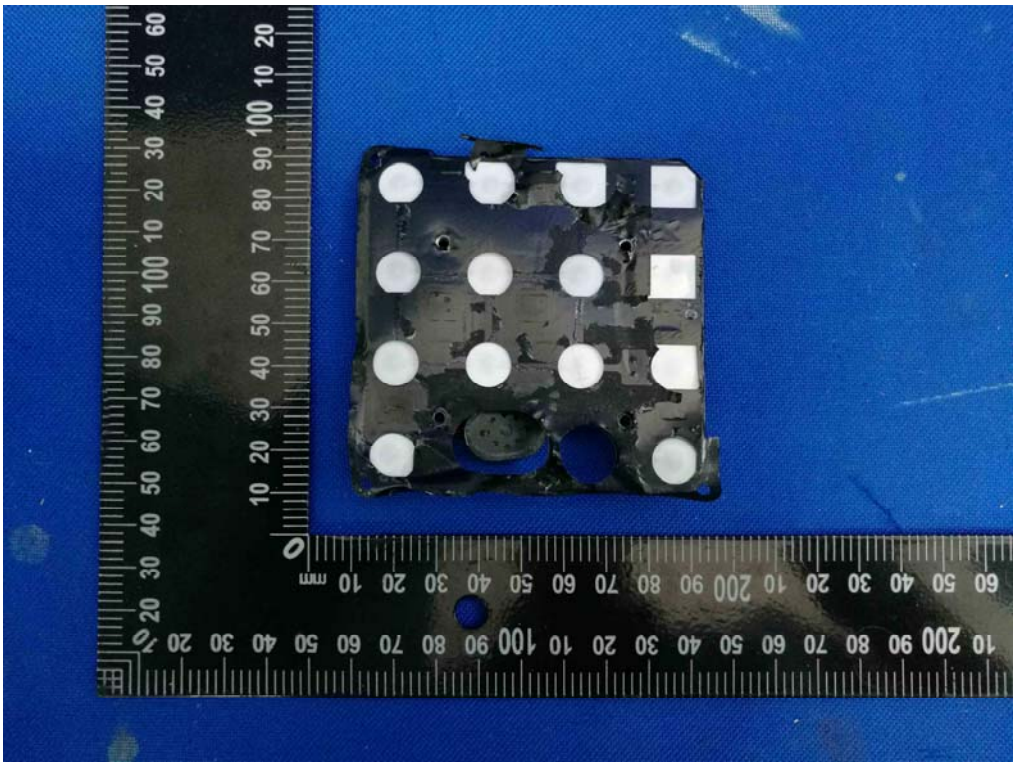

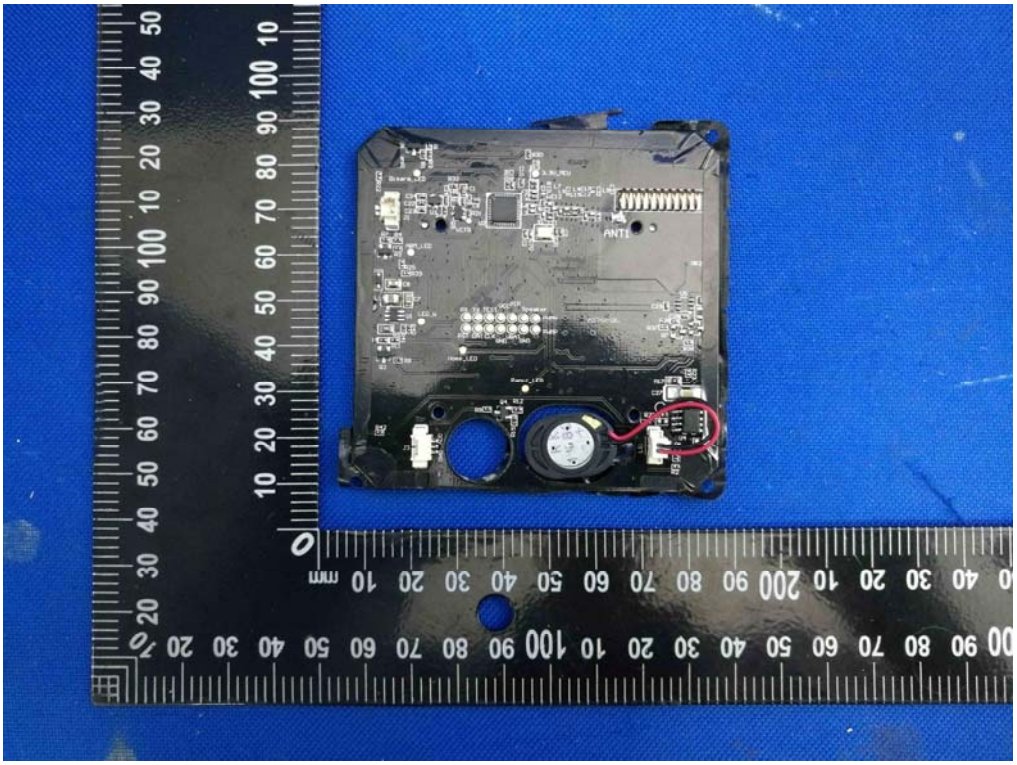

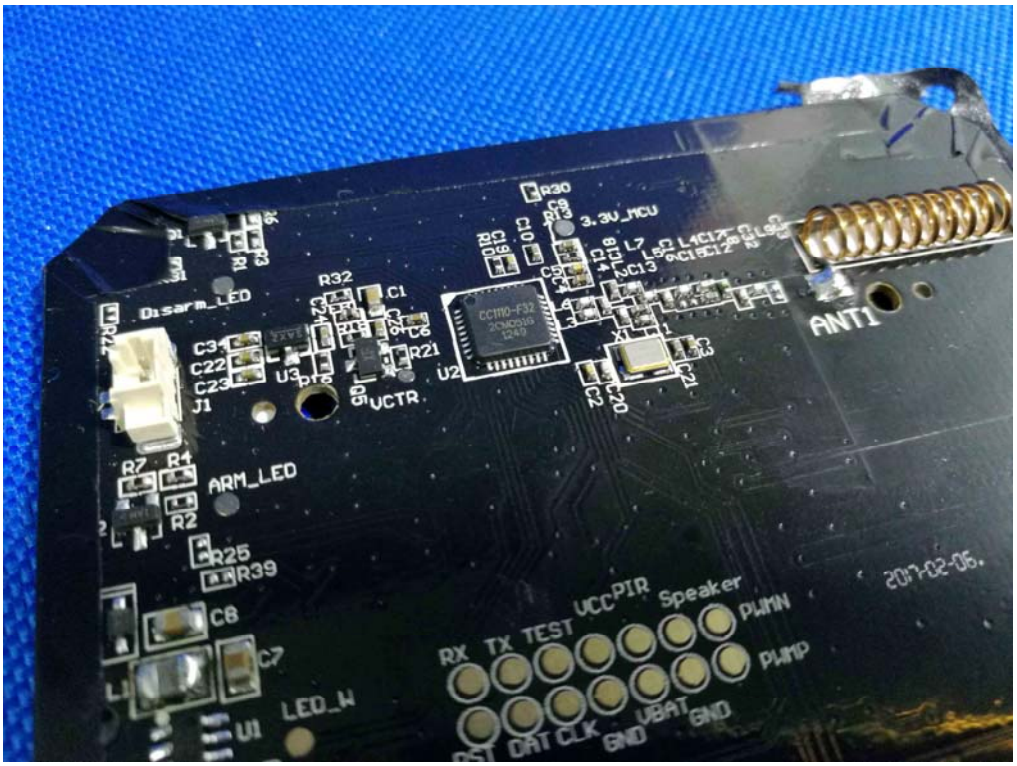
R30
3.3V_MCU
Disarm_LED
R32
C1
C3
C22
C23
J1
U3
R21
U2
VCTR
ANT1
R7
R4
R2
ARM_LED
R25
R39
C8
C7
U1
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TX
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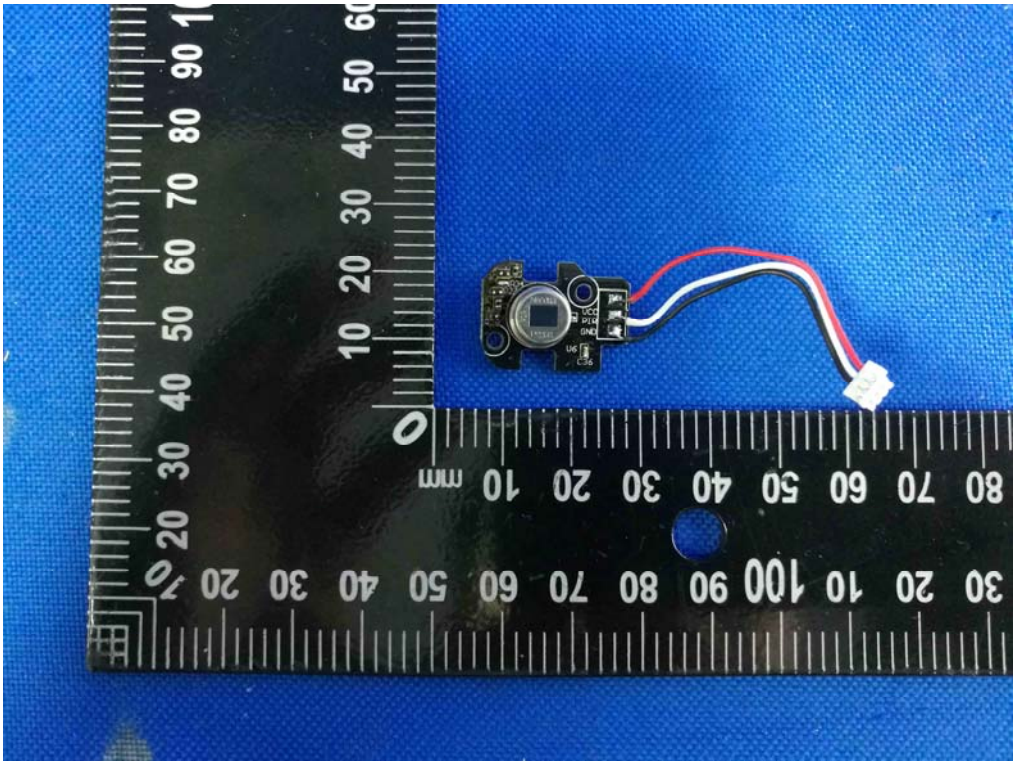
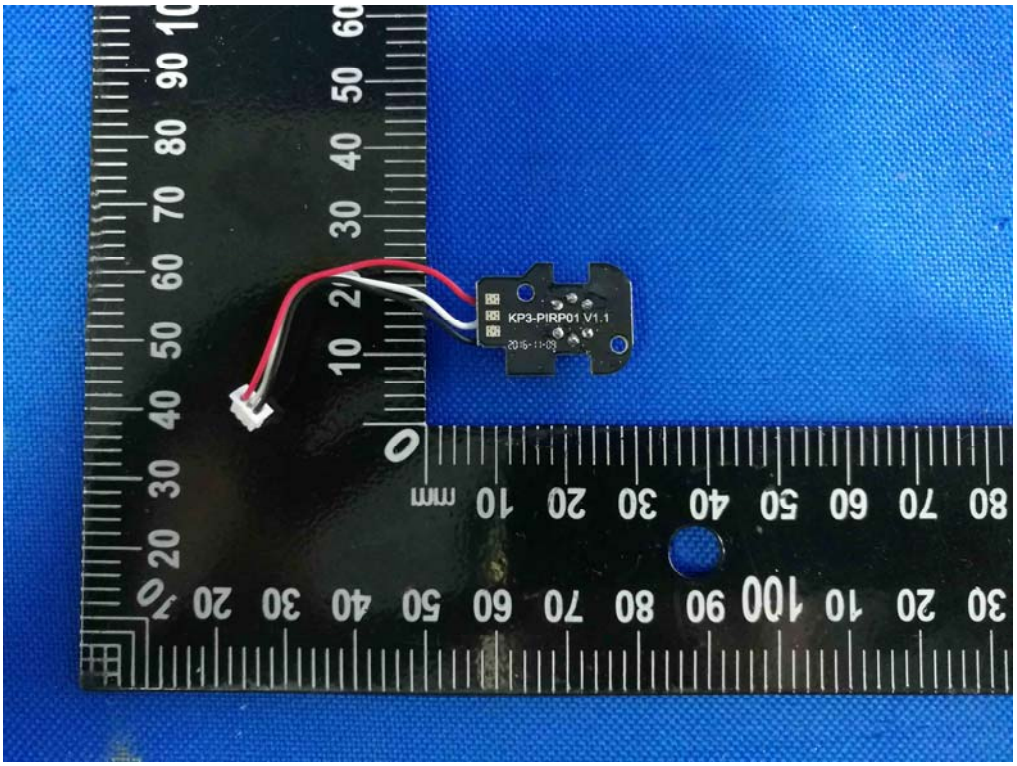
VCC
PIR
Speaker
PWMN
PWMP
RST
DAT
CLK
GND
VBAT
GND





END OF REPORT